Minutes, 12/15/04 Tevatron BPM Upgrade Meeting
Stephen Wolbers

This set of minutes, and all future minutes, are or will be deposited in the Beams Document Database as document number 792.

The agenda as announced consisted of:

1. Report from Bob and Steve
2. Report from subproject leaders
3. Report from Technical Coordinator -- Jim Steimel
4. AOB

1. Report from Steve, Bob is away Mon-Thur this week.

- During the holiday period meetings will probably only be held on Wednesdays. Steve W. will be gone December 20-27. Bob and Jim will call a meeting Dec. 22 if they want. Steve will call a project meeting on December 29.

- The MOUs for the electronics and software support for the TeV BPM upgrade are finished and will be signed by Vicky and Roger soon.

- 4 abstracts should have been submitted to the Particle Accelerator Conference. (1481, 2032, 1922, 1434)

- (Not announced in the meeting: The TeV BPM Upgrade project will report at the All Experimenters Meeting, probably on Monday January 24, 2005.)

2. Reports from L2 Managers

Tim Kasza:

- Tim's slides can be found in AD doc 1381-v13.

- Echotek testing continues. The 5 boards that failed and were sent back to Echotek have come back, were retested, and now check out fine. There are 3(maybe now 4) more boards with the same or similar errors that will need to go back for repair. All 250 boards for TeV/MI/transfer BPMs have arrived at Fermilab.

- A few boards have been retested after a firmware upgrade. The gains are the same to within 1 or 2 parts in a thousand. The change is systematic and may reflect a slight change in the size of the test signal. We concluded that the remaining boards with old firmware should be upgraded (and the DB should keep track of which ones were upgraded)

but that full retesting is not needed. We also decided that all of the old firmware boards in various test stands and other places need to be tracked down and upgraded to the new firmware.

- A testplan for the filter and timing boards is now available for review as AD doc #1499. People should read and comment.

- 1 timing board (TGF) from the production run has been picked up and tested at Fermilab. A couple of problems were found and fixed and the board worked very well. The company is going forward with production. Expected delivery of all 48 boards for TeV BPM and transfer line BPMs are expected by mid-January. We had a discussion of how we proceed with 5 prototype boards and 1 production board and whether we should push harder on getting more production boards earlier or waiting for the boards to be properly finished. We concluded that we will review the situation weekly and will decide how to proceed depending on what we need to continue progress on the project.

- The filter board assembly is in progress. It is hoped that early boards can be obtained and looked at as soon as possible.

Bob Forster:

- AD doc #1498 was added recently. It covers the TeV BPM subrack details. People should read and comment.

- 15 out of 27 Optilogic boxes are in hand. Many of the remaining parts for mounting and electrical/signal connections are in hand or are being put together. Brian asked whether a test setup could be created so that Charlie can start to work on the interface. Bob will get in touch with Charlie and start to work on the details.

- Labels for the panels above and below the VME crates are essentially ready. Final locations need to be determined.

Brian Hendricks:

- Work is advancing to get the turn-by-turn measurements working. Brian is working with Luciano to get the necessary support and it now exists.

- Roger Tokarek program (W136) will be used to test the turn-by-turn measurements.

- Lin Winterowd is working on pbar capability for T39.

- B3 has been added to the W25 diagnostic application.

Mike Martens:

- Mike is looking at the A3 BPMs. So far he sees that the Snapshots are working and the orbits move as expected (direction and magnitude) when the beam is moved.

- There are quite a few things that either are not working yet or are not working correctly. Mike mentioned FTP (>15 Hz problem), abort buffer (needs to be checked), profile frames, SDA, turn-by-turn, injection turn-by-turn.

- Mike has a plan to move the beam at pre-shot setup time (or whenever it can be done) in a grid (spiral) pattern. He also has a plan to take data to help us understand if the pbar measurement actually gives the position that is expected.

Rob Kutschke:

- Rob requests the filter board and Echotek gains and attenuation measurements be sent to him for the A3 system.

- Rob is very interested in turn by turn data.

- Rob showed analysis of some of the recent stores. The behavior was in general quite good but there was some odd behavior that he pointed out/showed. Jim and Luciano and others are aware of the reason for many if not all of these and work continues to make the system function correctly in all cases.

3. Report from Jim Steimel, Technical Coordinator

- TCLK debugging continues. Some functionality has been disabled as the debugging proceeds.

- The B3 ACNET devices are now available. The B3 crate is being set up in the FCC3 teststand area.

- The cross-talk between different triggers has returned. A 50 ohm resistor was added to the input of the trigger input on the 4 Echotek boards in A3. This seems to have solved the problem. Before we move to modify any other boards it seems clear that we need to talk to Echotek, understand any warranty implications as well as any tracking issues with respect to a change of this type.

- A new elog will be established for the TeV BPM project. It will be called "BPM". It will be used to communicate among all the many people who are working with the A3 and future production systems and are looking at the data.

4. AOB.